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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/754,377	01/05/2001	Katsuhiko Sumita	2224-0181P	3526

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EXAMINER

SHEWAREGED, BETELHEM

ART UNIT	PAPER NUMBER
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1774

7

DATE MAILED: 11/22/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/754,377

Applicant(s)

SUMITA ET AL.

Examiner

Betelhem Shewareged

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 September 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's response filed on 09/06/2002 has been fully considered. All previous rejections have been withdrawn in view of Applicant's amendment and comments.
2. Claims 1 and 3-17 are amended, claims 2 and 18-25 are canceled, no new claims are added, and thus claims 1 and 3-17 are pending.

New Rejections

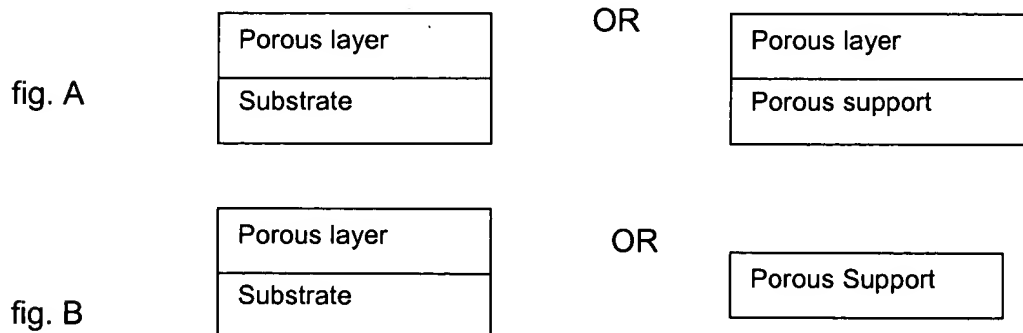
Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1, 3-8 and 10-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a. In claims 1, it is not clear if the image receiving sheet comprises a porous layer onto a substrate or onto a porous support (see fig. A below), or it is not clear if the image receiving sheet comprises a porous layer onto a substrate or the image receiving sheet comprises a porous support (see fig. B below). Clarification is requested.



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OK b. In claims 13 and 17, it is not clear if the porous support comprises a layer containing organic acid or if the organic acid is contained in the vicinity of one side of the porous support. Clarification is kindly requested.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1 and 3-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamada et al. (US 6,177,181) in view of Harasawa et al. (US 5,445,868) and Iwasa et al. (US 6,300,260).

Hamada discloses a recording sheet having a substrate and a porous membrane onto the substrate. The porous membrane is equivalent to the claimed porous layer. The porous substrate can be a nonwoven fabric (col. 10, line 44). The porous membrane comprises a hydrophilic polymer such as cellulose derivatives (col. 4, line 15) and conventional additives such as coating performance improvers (col. 10, line 35). The porous membrane has a microphase separation structure (col. 4, line 18). The maximum mean pore size of the porous membrane is 0.4 μm (col. 3, line 21). The porous membrane is separable from the substrate (col. 11, line 46). Hamada fails to disclose the claimed organic acid in the porous membrane.

Harasawa teaches a recording sheet having a substrate and a colorant absorbing layer (abstract), wherein the absorbing layer is porous (col. 3, line 4). The

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colorant absorbing layer is equivalent to the claimed porous layer. The absorbing layer contains a binder such as polyvinyl alcohol or hydroxy cellulose (col. 3, line 61) and an organic acid having aromatic carboxyl group (col. 1, lines 45-61). With respect to solubility, it is elementary that the mere recitation of newly discovered function or property, inherently possessed by things in the prior art, does not cause a claim drawn to those things to distinguish over the prior art. *In re Swinehart et al.*, 169 USPQ 226 at 229. Since the Harasawa reference teaches all of Applicant's claimed compositional limitations of the organic acid, it is inherent that the reference organic acid function in the same manner claimed by Applicant. The burden is upon Applicant to prove that the subject matter shown to be in the prior art does not possess the characteristic relied on. Furthermore, Harasawa does not disclose the claimed content of the organic acid, and the claimed amount of the organic acid on a dried matter basis. The experimental modification of this prior art in order to ascertain optimum operating conditions fails to render applicants' claims patentable in the absence of unexpected results. *In re Aller*, 105 USPQ 233. One of ordinary skill in the art would have been motivated to adjust the content of organic acid, and amount of organic acid on a dried matter basis in order to optimize the water resistance and ink-absorbing properties of the layer. A prima facie case of obviousness may be rebutted, however, where the results of the optimizing variable, which is known to be result-effective, are unexpectedly good. *In re Boesch and Slaney*, 205 USPQ 215.

Hamada and Harasawa are analogous art because they are from the same field of endeavor that is the recording medium art. At the time of the invention, it would be

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obvious to a person of ordinary skill in the art to combine the absorbing layer of Harasawa with the invention of Hamada in order to provide enhanced print quality such as prevention of color change of the recording sheet by incorporating organic acid in the recording sheet (col. 1, line 33 of Harasawa).

With respect claim 13, the porous substrate would inherently contain organic acid for the following reason. The solution containing organic acid for making the porous membrane is applied on a substrate and then dried. Since the substrate is porous some of the solution containing organic acid would sink into the porous substrate before drying.

With respect to adhesion strength, it is elementary that the mere recitation of newly discovered function or property, inherently possessed by things in the prior art, does not cause a claim drawn to those things to distinguish over the prior art. *In re Swinehart et al.*, 169 USPQ 226 at 229. Since the combination of Hamada and Harasawa teaches all of Applicant's claimed compositional and positional limitations, it is inherent that the reference article function in the same manner claimed by Applicant. The burden is upon Applicant to prove that the subject matter shown to be in the prior art does not possess the characteristic relied on.

In regard to claims 17, the use of polyester fabric as a base material is known in the image receiving sheet art because polyester fabric is light-weight and flexible, and have high durability and high resistance to tensile tearing (col. 1, line 18 of Iwasa).

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Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Betelhem Shewareged whose telephone number is 703-305-0389. The examiner can normally be reached on Mon.-Thur. 7:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H Kelly can be reached on 703-308-0449. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-5408 for regular communications and 703-305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.

BS *BS*
November 17, 2002.

CYNTHIA H. KELLY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700

